

AMENDMENTS TO THE CLAIMS

1. (presently amended) A segmented annular mold for forming a tread belt having a reinforcing belt structure having a radial thickness (t), the mold comprising:
a plurality of ~~stationary~~ radially movable inner segments for forming the inner surface of the tread belt; holding means for maintaining the inner segments at relatively constant dimension during molding, and
a plurality of radially movable outer mold segments for forming the outer tread belt surface wherein the radially inner and radially outer segments form a mold parting line.
2. (original) The segmented mold of claim 1 wherein the radially inner segments have upper and lower lateral edge forming portions extending outwardly to the parting line.
3. (original) The segmented mold of claim 1 wherein the radially outer mold segments have upper and lower lateral edge forming portions extending inwardly to the parting line.
4. (previously presented) The segmented mold of claim 1 wherein the holding means further includes a slidable hub assembly, ~~the slidable hub assembly having a central shaft, an upper hub portion and a lower hub portion each slidably mounted onto the central shaft; each upper and lower hub portions having a plurality of linkage arms pivotably connected to the respective hub portion and the radially inner segments, each circumferentially adjacent inner segment being connected to either the upper or lower hub portion in an alternating pattern, the movement of one of the hub portions relative to the other hub portion being independently actuated by one or more means for moving the hub portions, and wherein the movement of the lower and upper hub portions into interlocking alignment moves the inner segments to form an annular ring.~~
5. (presently amended) The segmented mold of claim 4 wherein ~~the tread belt has a radially inner 0° wire reinforced layer, two or more cross angled wire reinforced belt layers integrated between a 90° wire reinforced belt layer and the 0° wire layer; and~~

~~the mold parting line is located radially between or above the radially outermost cross ply layer and the 90° wire reinforced layer.~~ the slidable hub assembly further includes a central shaft, an upper hub portion and a lower hub portion each slidably mounted onto the central shaft; and each upper and lower hub portions having a plurality of linkage arms pivotably connected to the respective hub portion and the radially inner segments.

6. (previously presented) A segmented annular mold for forming a tread belt comprising:

a plurality of outer tread belt forming segments;

a plurality of radially movable and outwardly expandable inner segments for forming the inner surface of the tread belt;

a slidable hub assembly, the slidable hub assembly having a central shaft, an upper hub portion and a lower hub portion each slidably mounted onto the central shaft; each upper and lower hub portions having a plurality of linkage arms pivotably connected to the respective hub portion and the radially inner segments, each circumferentially adjacent inner segment being connected to either the upper or lower hub portion in an alternating pattern, the movement of one of the hub portions relative to the other hub portion being independently actuated by one or more means for moving the hub portions, and wherein the movement of the lower and upper hub portions into interlocking alignment moves the inner segments to form an annular ring.

7. (previously presented) The segmented annular mold for forming a tread belt of claim 6 further comprising:

a plurality of split J frames, one split J frame for supporting each outer tread belt forming segment.

8. (previously presented) The segmented mold for forming a tread belt of claim 7, further comprises:

a base plate support attached to each split J frame;

a plurality of linear bearing rails and bearing blocks, the bearing blocks being attached to the inner and outer segments, a pair of the linear bearing rails providing linear guides for the segments.

9. (previously presented) The segmented mold for forming an annular tread belt of claim 8 further comprises:

a cooling plate interposed between each segment and the linear bearing blocks attached to the respective segment.

10. (original) The segmented mold for forming a tread belt of claim 9 wherein the cooling plate has a plurality of passages for passing a coolant medium.

11. (withdrawn) A method of molding an annular tread belt comprises the steps of:
providing an open segmented annular mold for receiving and forming a tread belt having a reinforcing belt structure having a radial thickness (t), the mold having a plurality of radially movable and outwardly expandable inner segments for forming the inner surface of the tread belt and a plurality of radially movable and contracting outer segments for forming the outer tread belt surface wherein the radially inner and radially outer segments form a mold parting line at a location radially outward of a midpoint of the belt reinforcing structure of the tread belt at a location greater than 50% (t) as measured from the radially innermost surface of the belt reinforcing structure;

inserting a tread belt into the open mold;
closing the mold; and
curing the tread belt.

12. (withdrawn) The method of claim 11

wherein the step of closing the mold includes the steps of
moving a plurality of circumferentially alternating inner segments into radial contact with the tread belt;
moving a plurality of outer segments into contact with the tread belt, the tread belt contacting outer segments being aligned with the contacting inner segments;
moving the remaining inner segments into contact with the tread belt;
moving the remaining outer segments into contact with the tread belt; and then
moving all outer segments to a fully closed mold curing position.

13. (withdrawn) The method of claim 11 wherein the step of curing the tread belt includes the step of pushing either the inner segments radially inwardly or the outer segments radially outwardly to allow the parting line to gap under thermal expansion of the rubber as the tread belt is cured.

14. (withdrawn) The method of claim 13 wherein the inner segments are restrained mechanically and the outer segments are allowed to move radially outwardly.

15. (withdrawn) A tread belt comprising
a radially outer tread;
a belt reinforcing structure, the belt structure having at least a radially inner layer of 0° circumferentially extending wires, a pair of cross ply layers and a radially outer layer of 90° laterally extending wires; and
a parting line radially outward of the radially inner layer and at least one of the layers of the cross ply layers.

16. (new) A segmented annular mold for forming a tread belt comprising:
a plurality of outer tread belt forming segments;
a plurality of radially movable and outwardly expandable inner segments for forming the inner surface of the tread belt;
a slidable hub assembly, the slidable hub assembly having a central shaft, an upper hub portion and a lower hub portion each slidably mounted onto the central shaft; wherein the hub portions are connected to the inner segments.

17. (new) The segmented mold of claim 16 wherein each upper and lower hub portions having a plurality of linkage arms pivotably connected to the respective hub portion and the radially inner segments.

18. (new) The segmented mold of claim 17 wherein each circumferentially adjacent inner segment is connected to either the upper or lower hub portion in an alternating pattern.

19. (new) The segmented mold of claim 18 wherein the movement of one of the hub portions relative to the other hub portion being independently actuated by one or more means for moving the hub portions, and wherein the movement of the lower and upper hub portions into interlocking alignment moves the inner segments to form an annular ring.

This listing of claims will replace all prior versions and listings of claims in the application.